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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/940,947	04/21/97	LIO	E 30454-21

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MM61/0406

EXAMINER

LE, D

ART. UNIT

PAPER NUMBER

2816

DATE MAILED: 04/06/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>08/840,947</b>	Applicant(s) <b>LIU</b>
	Examiner <b>DINH LE</b>	Group Art Unit <b>2504</b>

Responsive to communication(s) filed on \_\_\_\_\_.

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1-19 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-19 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been

received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Drawings***

The drawings filed on 4/21/1997 are objected to by the PTO Draftsperson for the reasons noted on the attached Notice of Draftsperson's Patent Drawings Review, form PTO-948.

The drawings are objected to in that all boxes in Figure 2 should be labeled as its functions. Also, the terminals (11, 13, 19) in Figure 1 and the terminals 21, 23, 41, 43, 49, etc. in Figure 2 are not labeled as their functions. Correction is required.

### ***Disclosure Objected to, Minor Informalities***

The disclosure is objected to because of the following informalities:

- claims 2-3, 5-10, 12-13 and 15 18, "A circuit", "An IC" and "A method" at line 1 should be corrected as --The circuit--, -- The IC-- and --The method-- for proper support. Correction is required.

### ***Specification***

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claimed Subject Matter Not in Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The recitation "noise detector circuit" in claim 9 lacks antecedent basis in the specification. Correction is required.

### ***Claim Rejections***

### ***Claim Rejections - 35 USC § 112***

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Claims 1-19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is not understood how the second circuit is designed to have equal noise to the first circuit or to produce noise only as recited in claims 1 and 4, how the "second circuit can be an inverse function of said first circuit" in claim 7 and how the "noise detector circuit" in claim 9 can detect noise since the specification does not disclose how the second circuit is designed and how noise is detected. Clarification is required.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, the recitation "first function" is vague and indefinite because it is not understood what the "first function" is, where the "noise component" is from and how the first circuit can include the noise. The same is true for claims 4 and 7.

In claims 3, 8 , 14 and 18, it is not understood what the "halving circuit" is and how the substractor can be the halving circuit.

In claim 4, the term "designed" is vague and indefinite because it is not understood how the second circuit is designed.

In claim 11, it is not understood how the noise canceling circuit can process the outputs from the plurality of analog circuits. It is unclear how the recitations "digital circuit", "analog circuits", "noise detector circuit" and " noise canceling circuit" are read on the preferred embodiment. Insofar as understood, no such means are seen in the drawings. Also, the description of the present invention is incomplete because the claim fails to provide an input/output.

In claim 14, it is unclear how the first output and second output can be read since no structure that performs the reading function. Also, what is the "null signal" at line 4? The same is true for claims 18-19.

In claims 17-18, "said added output" lacks antecedent basis.

The remaining claims are rendered indefinite due to the deficiencies of claims 1, 4, 7 and 14 as stated above.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 9-11, 14-17 and 19 are rejected under 35 USC 102 (b) as being anticipated by IBM Technical Disclosure Bulletin (Vol. 28, No. 9 February 1986, page 3981).

With regard to claim 1, the IBM reference discloses in Figure 3 an interface circuit. The first circuit, the second circuit and the substractor as recited in claim 1 are anticipated, respectively, by the flip flops (S74) and the EXCLUSIVE OR gate S86. Claims 4, 7, 10-11, 14-17 and 19 are seen to read directly on the IBM reference.

With regard to claim 2, the digital circuit is anticipated by the input flip flop S74. The same is true for claims 5 and 9.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 8, 13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM Technical Disclosure Bulletin (Vol. 28, No. 9 February 1986, page 3981).

The IBM reference discloses in Figure 3 an interface circuit but does not disclose a halving circuit as called for in the claims. However, the halving circuit function as a substractor is notoriously well known in the art and employing the halving circuit in the IBM reference appears to be a design expedient for an engineer and well within the knowledge of a person having ordinary skill in the art at the time of the invention.

#### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Dinh Le whose telephone number is (703) 305-3790. The examiner can normally be reached on Monday to Friday from 7:00 A.M. to 5:00 P.M..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-7722.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [timothy.callahan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

DINH LE  
Examiner  
Art Unit: 2504

March 26, 1998